IN THE CLAIMS

1. (Original) A method for determining a size of a wheel on a train comprising the steps of:

determining a linear distance traveled by a train during a period of time by calculating a difference in positions reported by a positioning system located on the train at a start of the period and an end of the period;

repeating the determining step a plurality of times;

adding the linear distance from each of the determining steps to form a total distance; and

calculating the wheel size based on the total distance and a total number of wheel revolutions occurring during each of the determining steps.

2. (Original) The method of Claim 1, wherein the determining steps are performed successively with no separation between each period.

3. (Original) The method of Claim 1, wherein the determining steps are performed with a separation between at least two successive periods for which a difference is calculated in the determining step.

4. (Original) The method of Claim 1, wherein the positioning system is a global positioning system.

5. (Original) The method of Claim 1, in which no portion of the total distance corresponds to a section of track having a grade exceeding a grade threshold.

6. (Original) The method of Claim 5, further comprising the step of obtaining the grade from a track database using a position from the positioning system as an index.

7. (Original) The method of Claim 1, wherein the period is one second.

8. (Original) A system for determining a size of a train wheel comprising:

a control unit;

a positioning system in communication with the control unit, the positioning system being configured to provide the control unit with positioning information pertaining to the train; and

a revolution counter connected to the control unit, the revolution counter being configured to measure rotation of a train wheel;

wherein the control unit is configured to perform the steps of:

determining a linear distance traveled by a train during a period of time by calculating a difference in positions reported by the positioning system at a start of the period and at the end of the period;

repeating the determining step a plurality of times;

adding the linear distance from each of the determining steps to form a total distance; and

calculating the wheel size based on the total distance and a total number of wheel revolutions occurring during each of the determining steps.

9. (Original) The system of Claim 8, wherein the determining steps are performed successively with no separation between each period.

10. (Original) The system of Claim 8, wherein the determining steps are performed with a separation between at least two successive periods for which a difference is calculated in the determining step.

11. (Original) The system of Claim 8, wherein the positioning system is a global positioning system.

12. (Original) The system of Claim 8, wherein no portion of the total distance corresponds to a section of track having a grade exceeding a grade threshold.

13. (Original) The system of Claim 8, further comprising the step of obtaining the grade from a track database using a position from the positioning system as an index.

14. (Original) The system of Claim 8, the period is one second.

15. (Original) A method for determining the size of a train wheel comprising the steps of:

inputting a speed from a positioning system installed on a train;

obtaining rotation information from a tachometer;

determining a wheel size based on the rotation information and the speed.

16. (Original) The method of Claim 15, further comprising the steps of repeating the inputting, obtaining and determining steps a predetermined number of times and calculating an average of the wheel sizes determined in the determining step.

17. (Original) The method of Claim 15, wherein the tachometer measures a rotation speed of the train wheel.

18. (Original) The method of Claim 15, wherein the tachometer measures a rotation speed of a motor connected to drive the train wheel.

19. (Original) The method of Claim 15, wherein the tachometer measures a rotation speed of a driveshaft connected to the train wheel.

20. (Original) The method of Claim 15, wherein the tachometer measures a rotation speed of a gear connected to the train wheel.

21. (Original) The method of Claim 15, wherein the wheel size based on the rotation information and the speed is used as an initial estimate, and further comprising the steps of:

obtaining a first position from the positioning system;

obtaining a second position from the positioning system;

calculating a distance between the first position and the second position; and

calculating an updated wheel size based at least in part on the distance and a number of wheel revolutions occurring between the first position and the second position.

22. (Original) A method for supplying a corrected wheel sensor signal comprising the steps of:

determining a speed of a train;

determining a parameter of a signal that would be output by a wheel sensor connected to a wheel of a predetermined size if the wheel were on the train;

generating a corrected wheel sensor signal having the parameter;

supplying the corrected wheel sensor signal to at least one device configured to accept a wheel sensor signal from a wheel sensor connected to a wheel of the predetermined size.

23. (Original) The method of Claim 22, wherein the speed of the train is obtained from the positioning system.

24. (Currently Amended) The method of Claim 22, wherein the speed of the train is determined using a wheel size determined by a method comprising the steps of:

~~a control unit;~~

~~a positioning system in communication with the control unit, the positioning system being configured to provide the control unit with position information pertaining to the train; and~~

~~a revolution counter connected to the control unit, the revolution counter being configured to measure rotation of a train wheel;~~

~~wherein the control unit is configured to determine a size of the wheel based on a distance traveled as measured by the positioning system and wheel rotation information measured by the revolution counter~~

determining a linear distance traveled by a train during a period of time by calculating a difference in positions reported by a positioning system located on the train at a start of the period and an end of the period;

repeating the determining step a plurality of times;

adding the linear distance from each of the determining steps to form a total distance; and

calculating the wheel size based on the total distance and a total number of wheel revolutions occurring during each of the determining steps.